

CLAIMS

What is claimed is:

1. A guide system for controlled manipulation at a surgical site of a first instrument relative to a second instrument, said first instrument including an elongate flexible member interposed between a first effector and a first actuator, and said second instrument including a shaft interposed between a second effector and a second actuator, said guide system comprising:

a body including a first end and a second end, said body being configured to surround said shaft of said second surgical instrument such that said second effector extends from said first end and said second actuator extends from said second end;

an articulating member in longitudinal alignment with said body and selectively moveable to cause an extension portion of said articulating member to move to an extended position transverse from said body; and

a sleeve coupled to said extension portion and configured to retain said elongate flexible member such that movement of said extension portion causes corresponding movement of said sleeve to adjust a working angle between said first and second effectors.

2. A guide system as claimed in claim 1 wherein:

said articulating member resides within said body; and

said body further comprises a longitudinally oriented slot, said extension portion extending from said slot in said extended position.

3. A guide system as claimed in claim 2 wherein said body is further configured to surround said flexible member.

4. A guide system as claimed in claim 2 wherein said body comprises:

a first passage for location of said articulating member;
and

a second passage configured to accommodate said shaft.

5. A guide system as claimed in claim 1 wherein said body includes a gap extending from an interior surface to an exterior surface of said body for accommodating installation of said shaft into said body.

6. A guide system as claimed in claim 5 further comprising means for closing said gap following installation of said shaft.

7. A guide system as claimed in claim 1 further comprising a guide sleeve positioned on an exterior surface of said body and configured to slidably retain said flexible member.

8. A guide system as claimed in claim 1 wherein said articulating member further comprises an activator portion, said extension portion being pivotally coupled to said activator portion, wherein a pushing force applied to said activator portion causes said extension portion to move to said extended position, and a pulling force applied to said activator portion causes said extension portion to move to a retracted position.

9. A guide system as claimed in claim 8 wherein said extension portion comprises:

a first section having a first end and a second end, said first end including a first pivot joint, said second end being coupled with said sleeve at a second pivot joint, said first section being able to pivot at each of said first and second pivot joints; and

a second section having a third end and a fourth end, said third end being coupled with said sleeve at a third pivot joint, said fourth end and said activator portion establishing a fourth pivot joint, and said second section being able to pivot at each of said third and fourth pivot joints.

10. A guide system as claimed in claim 1 wherein said sleeve is configured to slidably retain said flexible member.

11. A guide system as claimed in claim 1 wherein a first longitudinal axis of said sleeve is approximately aligned with a second longitudinal axis of said articulating member when said articulating member is in a retracted position.

12. A guide system for controlled manipulation at a surgical site of a forceps relative to a cutter stapler, said forceps including an elongate flexible member interposed between a grasper head and a grasper actuator, and said cutter stapler including a shaft interposed between a stapler head and a stapler actuator, said guide system comprising:

a body including a first end, a second end, and a longitudinally oriented slot, said body being configured to surround said shaft such that said stapler head extends from said first end and said stapler actuator extends from said second end;

an articulating member residing within, and in longitudinal alignment with, said body, said articulating member including an activator portion and an extension portion pivotally coupled to said activator portion, and a pushing force applied to said activator portion causes said extension portion to exit from said slot and move to an extended position transverse from said body, and a pulling force applied to said activator portion causes said extension portion to move to a retracted position within said body; and

a sleeve coupled to said extension portion and configured to retain said elongate flexible member such that movement of said extension portion causes corresponding movement of said sleeve to adjust a working angle between said grasper head and said stapler head.

13. A guide system as claimed in claim 12 wherein said body comprises:

a first passage for location of said articulating member;
and

a second passage configured to accommodate said shaft.

14. A guide system as claimed in claim 12 wherein said extension portion comprises:

a first section having a first end and a second end, said first end including a first pivot joint, said second end being coupled with said sleeve at a second pivot joint, said first section pivoting at each of said first and second pivot joints; and

a second section having a third end and a fourth end, said third end being coupled with said sleeve at a third pivot joint, said fourth end and said activator portion establishing a fourth pivot joint, and said second section pivoting at each of said third and fourth pivot joints.

15. A guide system as claimed in claim 12 wherein said sleeve is configured to slidably retain said flexible member.

16. A guide system as claimed in claim 12 wherein a first longitudinal axis of said sleeve is substantially aligned with a second longitudinal axis of said articulating member when said articulating member is in said retracted position.

17. A forceps system for use in cooperation with a cutter stapler, said cutter stapler including a stapler head, a stapler actuator, and a shaft interposed between said stapler head and said stapler actuator, said forceps system comprising:

a grasping forceps including a grasper, a grasper actuator, and an elongate flexible member interposed between said grasper and said grasper actuator; and

a forceps guide system for controlled manipulation of said grasper relative to said stapler head, said guide system including:

a body having a distal end and a proximal end, said body being configured to surround said shaft of said cutter stapler such that said stapler head extends from said distal end and said stapler actuator extends from said proximal end;

an articulating member in longitudinal alignment with said body, said articulating member having an activator portion and an extension portion pivotally coupled to said activator portion, such that a pushing force applied to said activator portion causes said extension portion to exit from said slot and move to an extended position transverse from said body, and a pulling force applied to said activator portion causes said extension portion to move to a retracted position; and

a sleeve coupled to said extension portion and retaining said elongate flexible member such that movement of said extension portion causes corresponding movement of said sleeve to adjust a working angle between said grasper and said stapler head.

18. A forceps system as claimed in claim 17 wherein said sleeve slidably retains said flexible member.

19. A forceps system as claimed in claim 17 further comprising a guide sleeve positioned on an exterior surface of said body and slidably retaining said flexible member.

20. A forceps system as claimed in claim 17 wherein said body surrounds and slidably retains said flexible member.